



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,151	08/21/2006	Kyoichi Takeda	129093	5738
25944 7590 10/14/2009 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
LOVE, TREVOR M				
ART UNIT		PAPER NUMBER		
1611				
MAIL DATE		DELIVERY MODE		
10/14/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/590,151

Applicant(s)

TAKEDA ET AL.

Examiner

TREVOR M. LOVE

Art Unit

1611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Acknowledgement is made to Applicant's response filed 06/04/2009.

Claims 1-3 and 5-10 are pending and currently under consideration.

Claims objections to claims 1 and 2 have been withdrawn in view of Applicant's amendments to claims 1 and 2.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gruning et al (U.S. Patent number 6,242,499).

Gruning teaches a polyglycerol ester that is prepared in two stages. The polyglycerol, which includes diglycerol (diglycerin), is esterified using fatty acid, and then isostearic acid is mixed with the polyglycerol. The composition is heated to 250°C for three hours. The reaction mixture is then cooled to 180°C and is mixed with a dimer acid. The composition is then heated again to 250°C for three hours. An amber-colored viscous product is obtained which is characterized by a hydroxyl number of 68 and an acid number of 1.5 (see column 4, lines 46-62), this reads on **instant claim 5**.

Gruning fails to directly disclose the viscosity of the composition. Gruning also fails to directly disclose the molar ratios between the components. Furthermore, Gruning fails to directly disclose the molecular weight of the composition.

With regard to the viscosities of **instant claims 6-8**, it is noted that Applicant identifies in the specification, on the paragraph that bridges pages 8 and 9, that by controlling the hydroxyl or acid value "it is possible to easily control the viscosity and the hydroxyl value of the desired hydroxyl compound in the reaction of the ester compound obtained in the first step with a predetermined amount of dimer acid in the second step". It is noted that the hydroxyl value *and* the acid value are similar to the hydroxyl and acid values of example 4 on page 20 of the instant specification. It is noted that the instant specification teaches that it is easy to control the viscosity (see end of paragraph bridging pages 8 and 9 of the specification). It is furthermore noted that Applicant has shown in table 1 that the instant compositions with the specified viscosities have a hydroxyl value that is between 30 and 80, the composition of Gruning teaches a composition of a hydroxyl value of 68 (see column 4, lines 46-62). Furthermore, the composition is taught as being made by a similar, if the not same method. The instant composition is made by combining the diglycerin and isostearic acid at a temperature of between 180 and 250°C for about 3 to 40 hours, then said dimer is combined with said newly formed ester at a temperature of 150 to 330°C and the acid value of the composition is allowed to be preferably at most 3.0 (see instant specification, page 8, lines 16-30). In Gruning, the polyglycerol and isostearic acid at a temperature of 250°C for 3 hours, then said dimer is combined with said newly formed ester at a temperature of 250°C and the acid value of the composition is 1.5 (see column 4, lines 46-62). Therefore, the viscosity of the composition of Gruning would have been within the

claimed ranges since the composition comprises the same components, is reacted in the same way, and has the same hydroxyl and acid values.

With regard to the molar ratios and molecular weight of **instant claims 1-3 and 9-10**, the exact molecular weight of the polyglycerol component is not directly disclosed. Gruning teaches that a particularly suitable polyglycerol contains 0-30% glycerol, 15-40% diglycerol, 10-55% triglycerol, 2-25% tetraglycerol, and 0-15% pentaglycerol and higher (see column 3, lines 25-31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the molecular weight of the composition, and the molar ratio of the components. One would have been motivated to vary the molar ratio of the components in order to arrive at a desirable amount of esterification. Furthermore, the molecular weight of the composition depends on the intended use and is readily varied. It is noted the discussion above with regard to claims 6-8 wherein it is identified that both the instant claims and Gruning are teaching a composition with the same components, reacted in the same way, with the same hydroxyl values, and the same acid values, wherein it is also noted that both compositions are being used in cosmetics. It is further noted that MPEP 2144.05 states: "Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)."

Response to Arguments

Applicant argues in the response filed 06/04/2009 that Gruning does not render the instant claims obvious. Specifically, Applicant argues that the instant claim 1 claims a ratio of diglycerin, isostearic acid, and dimer acid of 1.0 to 1.4-1.6 to 0.5-0.8, whereas Applicant believes that Gruning teaches a ratio of 1.0 to 2.2 to 0.52. Applicant argues that the isostearic acid amount is above the upper limit instant claim 1, and the dimer acid amount is below the lower limit of instant claim 2. Applicant further states that said ratios being above and below the limits set forth in the claims would result in the composition of Gruning being inferior. Applicant's arguments are not found persuasive. Specifically, as stated above, the optimization of said ratios would be well within the purview of one of ordinary skill in the art. Further, Applicant's allegation that the composition would have unexpected results, and that the composition of Gruning would have inferior features based on said ratios is not found persuasive since Applicant argues that the isostearic acid being above the limit would result in a hydroxyl value that is below the range of the present invention, wherein it is noted that the hydroxyl value of Gruning is within the preferred hydroxyl value of the instant invention (see column 4, lines 60-62). Furthermore, the argument that the dimer value being below the limit would result in too low of a degree of polymerization to result in an oligomer with low viscosity is not found persuasive since the composition of Gruning is taught as being "[a]n amber-colored, viscous product". Therefore, since the values of the isostearic acid and dimer acid are able to be optimized, and the features that appear to be the critical components of the instant invention are taught in Gruning, Applicant's arguments are

not found persuasive. Applicant argues that Comparative Preparation Examples 1 and 6 are similar and comparable to the invention of Gruning. Applicant argues that said similarities would result in the invention of Gruning having a hydroxyl value outside the claimed range and features which are undesirable. Applicant's argument is not found persuasive since Gruning teaches the hydroxyl value and acid number of the invention of Gruning, wherein said hydroxyl number is within the instantly claimed range, and the acid number is closer to the Preparation Examples rather than the Comparative Preparation Examples (see instant specification, table 1). In view of Gruning teaching ratios which are close to those of the instant invention, and the hydroxyl value being within the claimed range, it is the position of the Examiner that Gruning is closer prior art than those in the Comparative Preparation Examples, therefore Applicant's arguments are not found persuasive. Applicant's attention is drawn to MPEP 716.02(e) which discusses comparison with the closest prior art. It is further noted that in Applicant's examples, the rating system "G", "M", and "B" are utilized. Though said rating system is utilized for a plurality of features, the empirical difference between a rating of "G" and a rating of "M" in many of the uses has not clearly been set forth. For instance, the water-holding test (instant paragraph [0051]) provides an empirical measure for "G" and "M", however, the compatibility test (instant paragraph (0052) uses relative terminology such as "high" and "slight". Therefore, in many of the examples, it is unclear how the instant invention is distinguishing from the comparative examples in situations where relative terminology is being relied upon.

Conclusion

No claims allowed. All claims rejected. No claims objected.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TREVOR M. LOVE whose telephone number is (571)270-5259. The examiner can normally be reached on Monday-Thursday 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Landau can be reached on 571-272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TL

/Sharmila Gollamudi Landau/

Supervisory Patent Examiner, Art Unit 1611